

# Zoning Massing Diagram

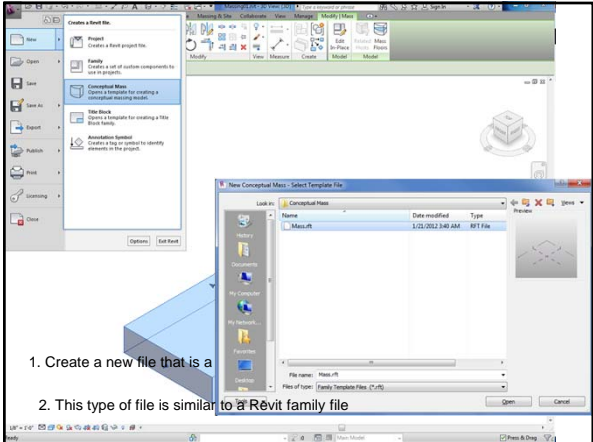
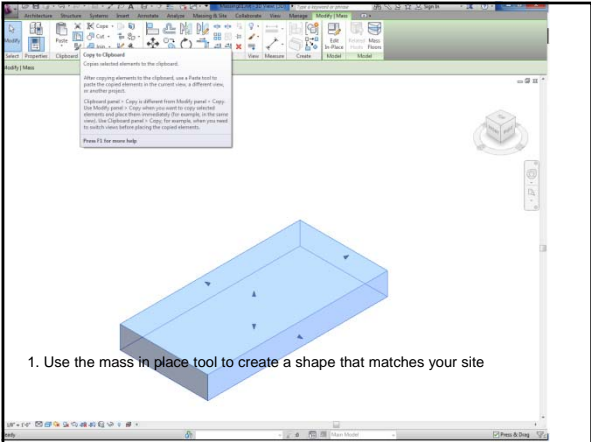
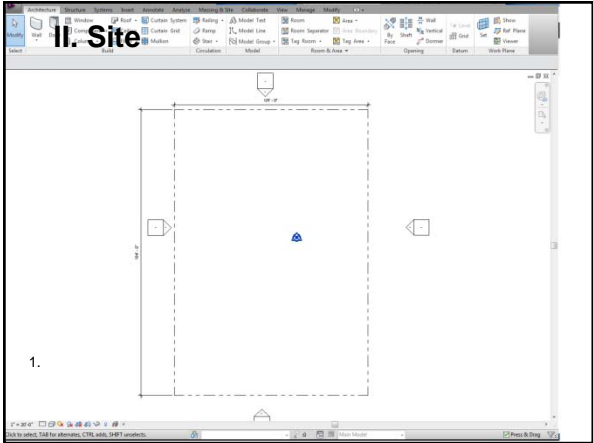
## Zoning Diagram

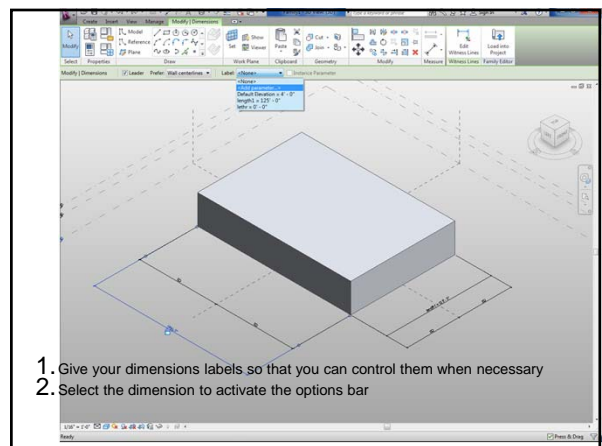
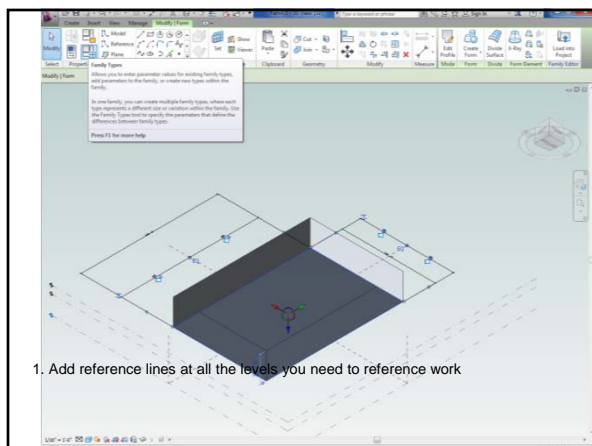
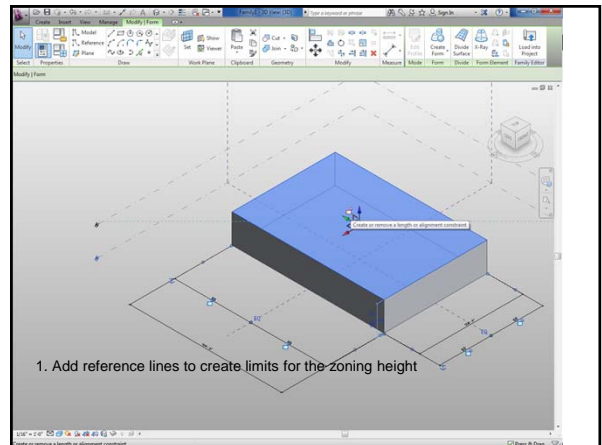
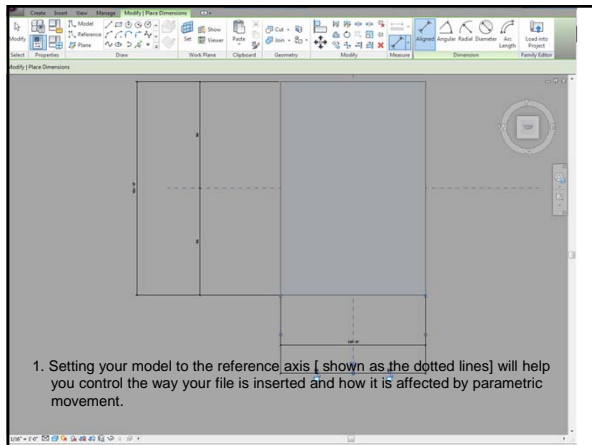
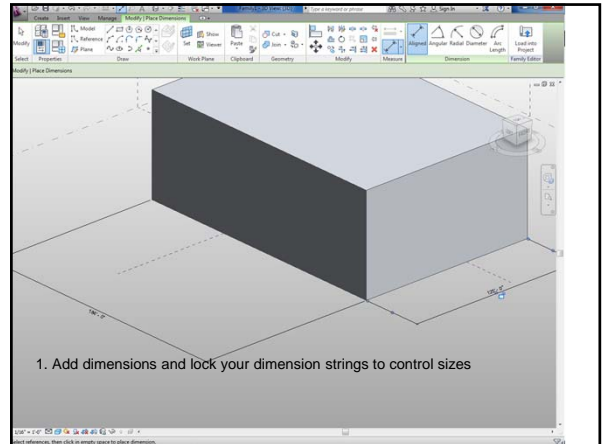
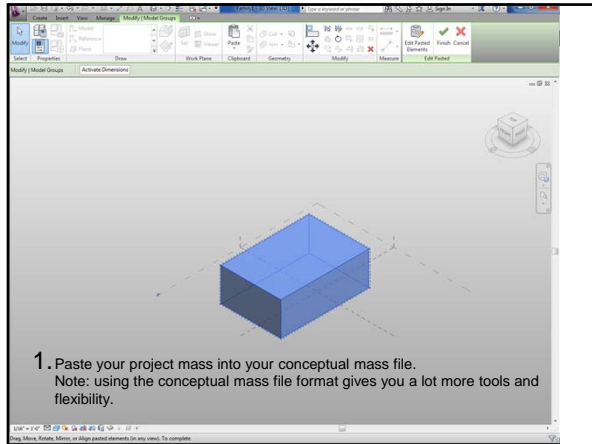
**Task:** Create a scaled Axonometric diagram which shows the project adherence to the proposed site's zoning restrictions, similar to those shown in the "zd1\_guide" pdf.

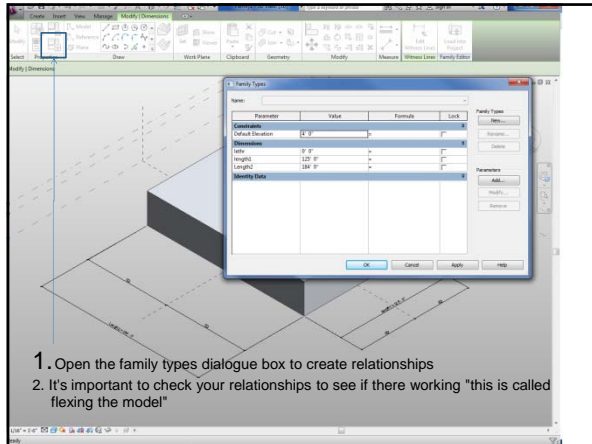
**Solution:** Use guides (Revit's reference tools) to create a massing (Revit's Conceptual massing tools), which will then be annotated to show:

1. Dimensioned Building Height
2. Dimensioned Street Wall Heights and Setbacks
3. Sky Exposure Plane
4. Permitted Obstructions

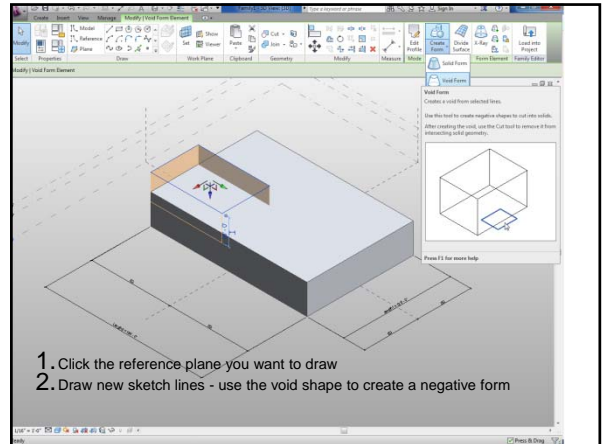
- ## Application
- I. Create a component, in the mass family category, to House all of the zoning massing geometry.
  - II. Place named guides along property lines and as required.
    - a. Determine site restriction based on zoning analysis.
    - b. Use Reference Planes as a guide for the restrictions (ex. Reference plane along property lines and in elevation view at 60' above the 0'-0" grade level for street wall height).
  - III. Create Massing geometry from planes.
    - a. Draw model line work to be used as a basis for 3d form which is locked to previously created references.
    - b. Use Model line work to create form of massing which complies with restrictions.



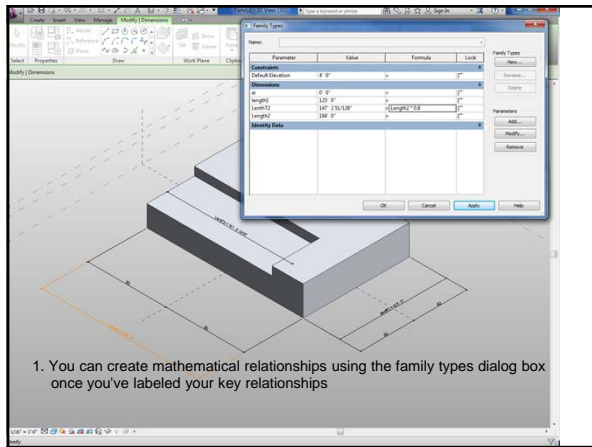




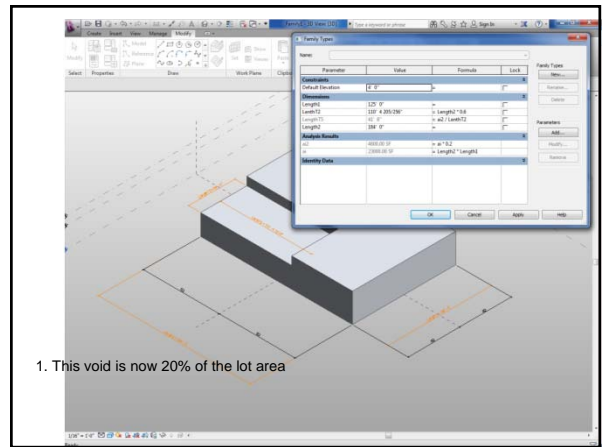
1. Open the family types dialogue box to create relationships
2. It's important to check your relationships to see if there working "this is called flexing the model"



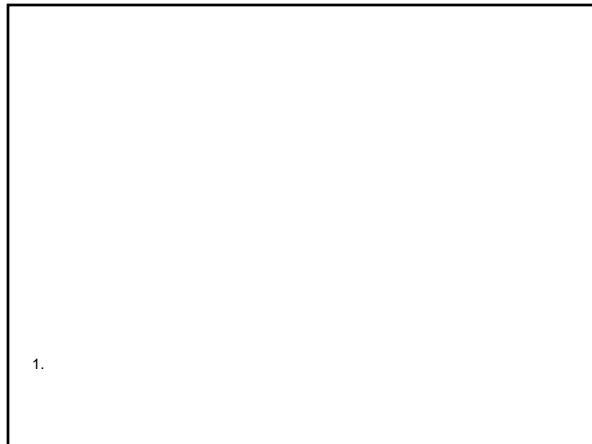
1. Click the reference plane you want to draw
2. Draw new sketch lines - use the void shape to create a negative form



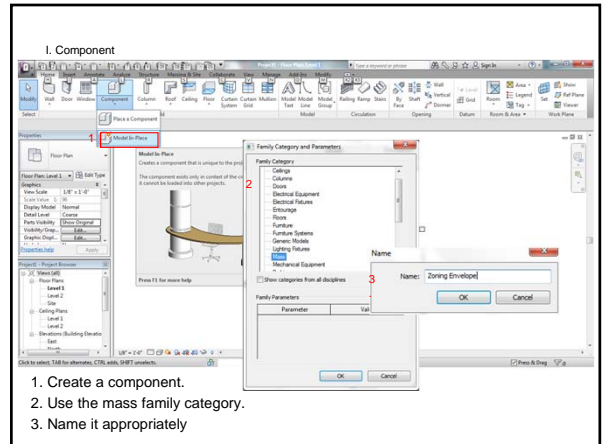
1. You can create mathematical relationships using the family types dialog box once you've labeled your key relationships



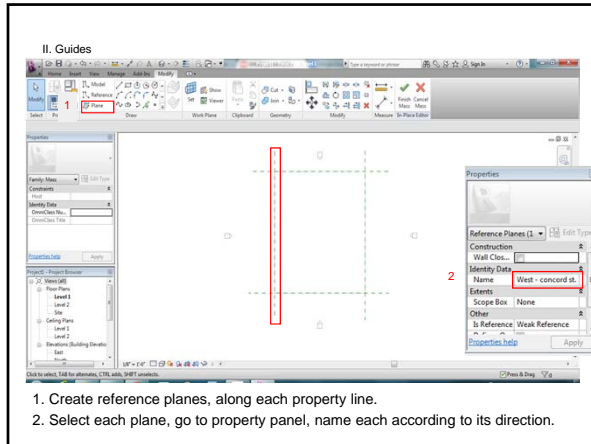
1. This void is now 20% of the lot area



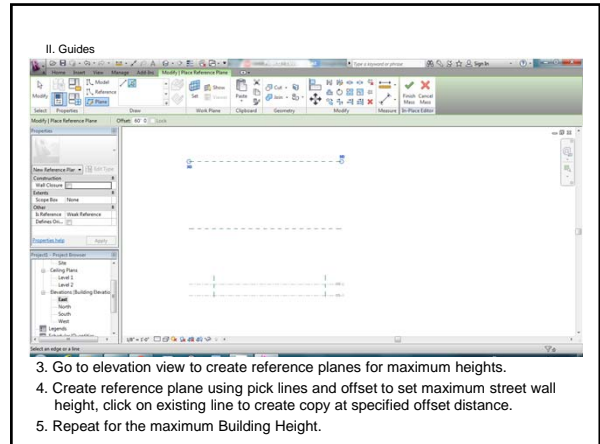
- 1.



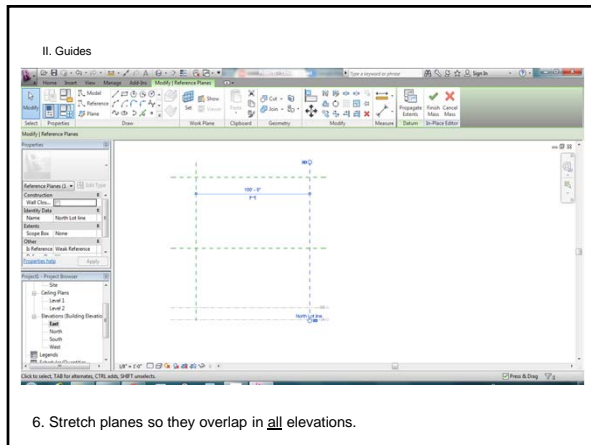
1. Create a component.
2. Use the mass family category.
3. Name it appropriately



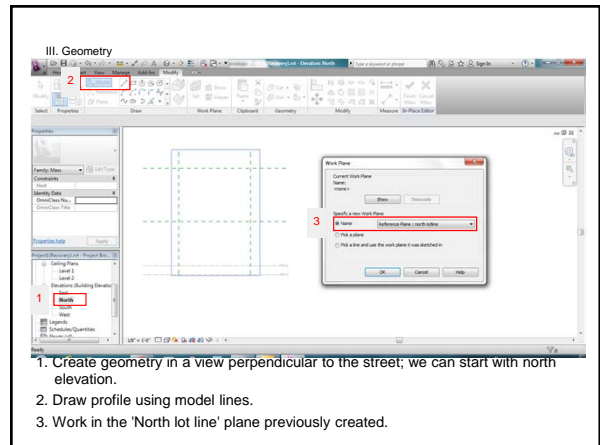
1. Create reference planes, along each property line.
2. Select each plane, go to property panel, name each according to its direction.



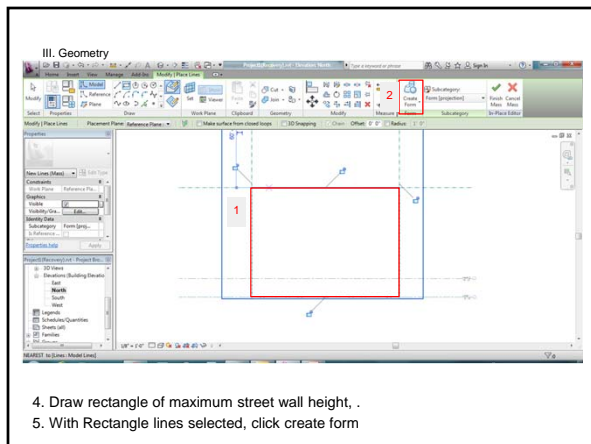
3. Go to elevation view to create reference planes for maximum heights.
4. Create reference plane using pick lines and offset to set maximum street wall height, click on existing line to create copy at specified offset distance.
5. Repeat for the maximum Building Height.



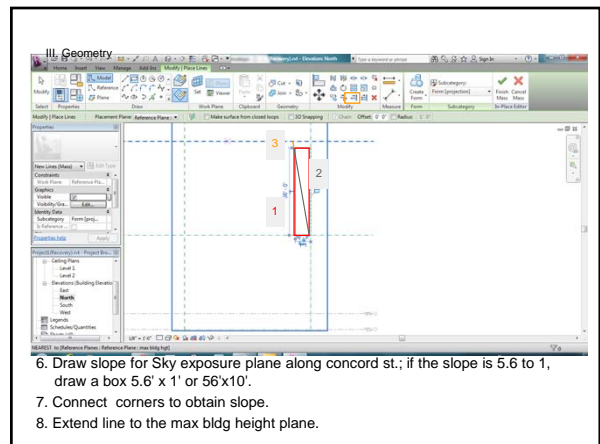
6. Stretch planes so they overlap in all elevations.



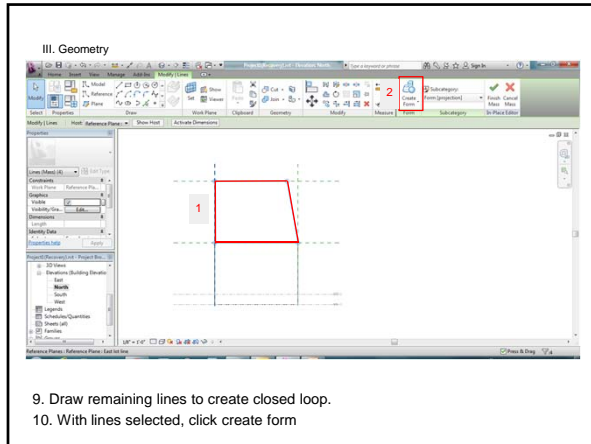
1. Create geometry in a view perpendicular to the street; we can start with north elevation.
2. Draw profile using model lines.
3. Work in the 'North lot line' plane previously created.



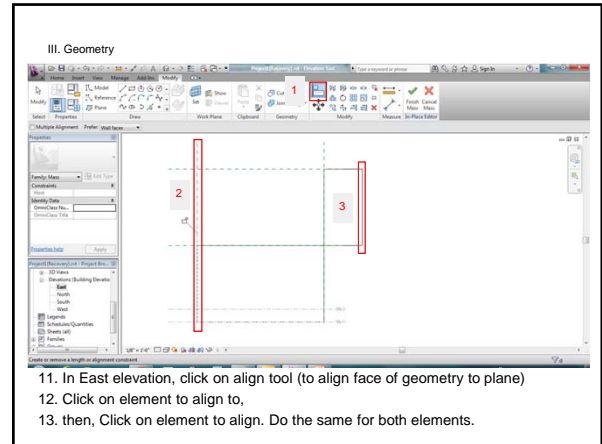
4. Draw rectangle of maximum street wall height, .
5. With Rectangle lines selected, click create form



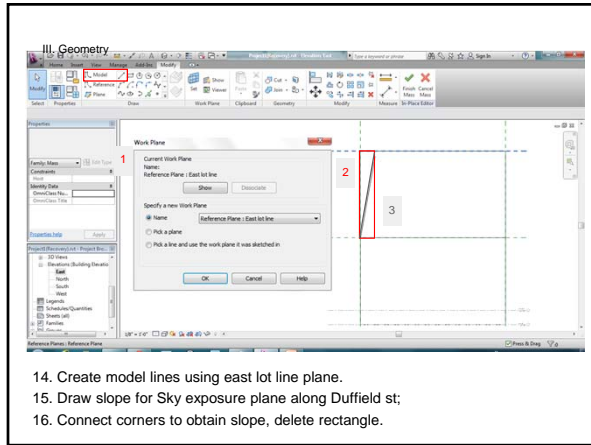
6. Draw slope for Sky exposure plane along concord st.; if the slope is 5.6 to 1, draw a box 5.6' x 1' or 56'x10'.
7. Connect corners to obtain slope.
8. Extend line to the max bldg height plane.



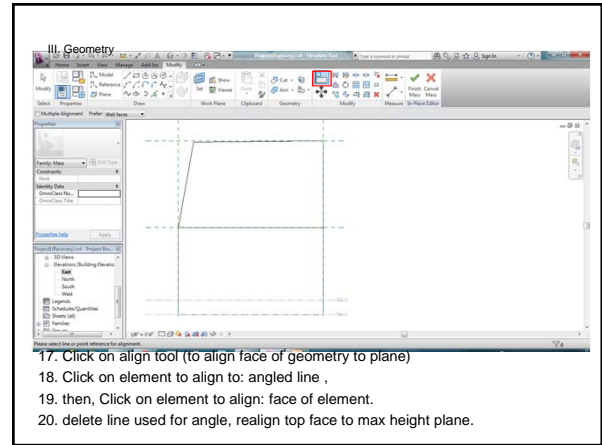
- 9. Draw remaining lines to create closed loop.
- 10. With lines selected, click create form



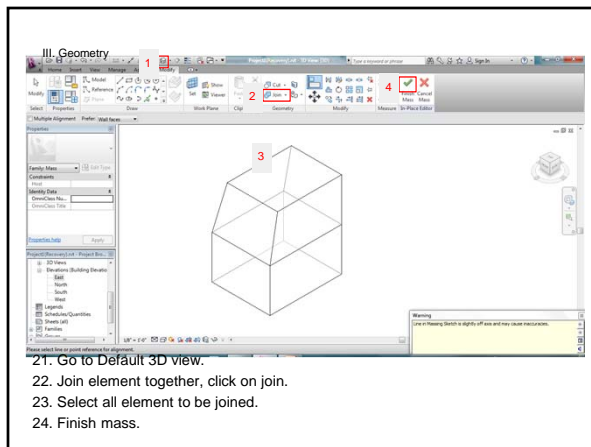
- 11. In East elevation, click on align tool (to align face of geometry to plane)
- 12. Click on element to align to,
- 13. then, Click on element to align. Do the same for both elements.



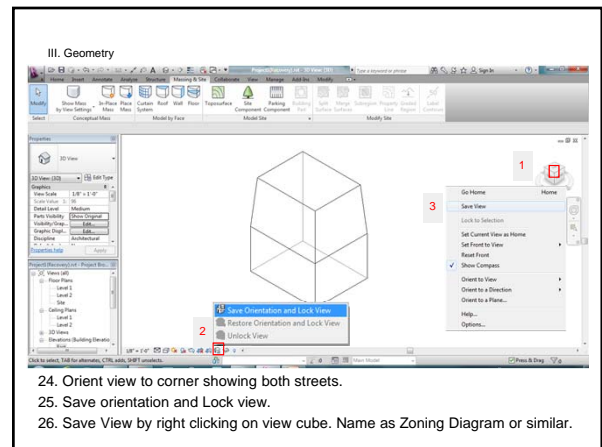
- 14. Create model lines using east lot line plane.
- 15. Draw slope for Sky exposure plane along Duffield st;
- 16. Connect corners to obtain slope, delete rectangle.



- 17. Click on align tool (to align face of geometry to plane)
- 18. Click on element to align to: angled line,
- 19. then, Click on element to align: face of element.
- 20. delete line used for angle, realign top face to max height plane.



- 21. Go to Default 3D view.
- 22. Join element together, click on join.
- 23. Select all element to be joined.
- 24. Finish mass.



- 25. Orient view to corner showing both streets.
- 26. Save orientation and Lock view.
- 27. Save View by right clicking on view cube. Name as Zoning Diagram or similar.